



SUPERVISOR'S REPORT ON THE MASTER'S THESIS

Master's thesis name **Transport safety assessment of road adaptive lighting implementation**
Author (including degrees) **Bc. Daniel Hamrle**
Master's thesis supervisors (including degrees) **Ing. Zuzana Bělinová, Ph.D.**
FH-Prof. DI Dr. Christian Brunner

Evaluation criteria and their classification

Fulfilment of the Master's thesis requirements and goals	B (very good) ... 1,5
Self-action and own initiative during the Master's thesis elaboration	A (excellent) ... 1,0
Application of knowledge gained by self-study and from scientific literature	A (excellent) ... 1,0
Usage of groundwork and data from practise	A (excellent) ... 1,0
Scientific level and contribution of the Master's thesis	C (good) ... 2,0
Formal aspects of the Master's thesis	A (excellent) ... 1,0

Further comments to the Master's thesis:

The thesis deals with a highly up-to-date topic of safety assessment of adaptive road lighting. This topic is today of great importance, as the focus on energy savings and safety is one of today's priorities in transportation. At the same time the relation between the luminosity and traffic safety is not sufficiently analysed and universally accessible and accepted methods for such assessment do not exist.

In his thesis Mr. Hamrle assessed road adaptive lighting project of the Swarco company in Vienna. The thesis is formally good structured, starting with the presentation of basic facts and technologies, continuing with summary of existing adaptive road lighting projects and presentation of the assessed project. Then the overview of traffic safety evaluation methods is given followed by the evaluation of the Swarco project and finished by the conclusion.

During the work on thesis Mr. Hamrle has studied several attitudes to traffic safety assessment in relation to the lighting and come with several proposal of evaluation of the influence on traffic safety. He was however limited with the data available, facing the problem of not having originally promised data at all and

forced to look for other data source (this difficulties caused even the postponement of the thesis). Based on the data finally available, he choose to use statistical evaluation of the changes using basic traffic parameters mean speed and speed variance.

This method has the advantage of being quite simple and based on data easily accessible. On the other hand it does not take into account all parameters that may be significant. However thanks to the simplicity it may be of further usage as the preliminary assessment of similar projects.

Besides the thesis results (limited by external factors), Mr. Hamrle has shown his ability of independent work, ability to study from scientific literature and the ability to deal with changing conditions (availability of data). Therefore I evaluate his thesis A (excellent)

Questions:

1. On your data sample the differences have not been statistically significant. Do you think you would get the same result also for larger data samples?
2. In case you were not restricted to data available, what method you consider the best for traffic safety evaluation of adaptive lighting (in case you have a. short-time data, b. long-time data)?

I recommend the Master's thesis for the defence.

Summary classification of the Master's thesis

A (excellent) ... 1,0

Master's thesis supervisor's name
Ing. Zuzana Bělinová, Ph.D.



Master's thesis supervisor's signature

In Prague.....09.01.2015



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Formal aspects of the Master's thesis	B (very good) ... 1,5

Further comments to the Master's thesis:

Due to the limited availability of data the outcome of the thesis is
rather specific for the investigated setup and cannot be seen as universal.

I recommend the Master's thesis for the defence.

Summary classification of the Master's thesis C (good) ... 2,0

Master's thesis supervisor's name
FH-Prof. DI Dr. Christian Brunner

.....
Master's thesis supervisor's signature

In Vienna..... **06.01.2015**